

Appln. No.: 10/671,456
Reply to the Office Action of February 25, 2004

REMARKS

Claims 1-8, 10 and 11 remain active in the case. Reconsideration is respectfully requested.

The present invention relates to a layered composite sheet formed from a thermoformable thermoplastic or mixture of thermoplastics.

Claim Amendment

Claim 1 has been amended by deleting, as auxiliaries, colorants and fillers, from the claim. Thus, the scope of the claimed invention has been reduced in scope. Entry of the amendment into the record is respectfully requested.

Invention

The present invention, as claimed, is directed to a layered composite sheet that comprises at least one substrate layer consisting essentially of glass-clear polystyrene, impact modified polystyrene, styrene-butadiene block copolymers with 15 to 40 % by wt of butadiene and 85 to 60 % by wt of styrene or mixtures thereof having a thickness ranging from 1 to 100 mm and at least one outer layer having a thickness ranging from 10 to 500 μm consisting of the same, or from different thermoformable thermoplastics of glass-clear or impact-modified polystyrene, styrene copolymers and mixtures thereof or consisting of glass-clear or impact-modified polystyrene, styrene copolymers or mixtures thereof into which is admixed at least one auxiliary selected from the group consisting of stabilizers flame

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retardants in result effective amounts wherein the outer layer comprises from 0.01 to 1 % by weight of a lubricant.

Prior Art Rejection

Claims 1-8, 10 and 11 stand rejected based on 35 USC 103(a) as obvious over Kishida et al, U. S. Patent 4,478,903 in view of Kitazaki et al, U. S. Patent 5,820,979 and Park et al U. S. Patent 4,911,976.

As has been argued on the record, applicants maintain that there is a clear distinction between the present layered composite sheet as claimed and the composite structure of the Kishida et al patent cited during the prosecution of the parent application, based on the fact that the outer layer of the present composite does not contain conductive carbon black, whereas the surface layer of the composite of the patent must contain conductive carbon black. Active Claim 1 has again been amended in a fashion, which takes the Examiner's comments in the outstanding Office Action into consideration to the effect that conductive carbon black (taught by Kishida et al) could be understood to fall within the rubric of a colorant (pigment) or a filler, and therefore the invention as claimed could be considered to contain a conductive component.. However, by virtue of the amendment now made to Claim 1, by which the additives of a colorant and a filler have been deleted from the claim, it is clear that the present layered composite sheet as claimed excludes the possibility of having a conductive component and therefore is clearly distinguished over Kishida et al which positively requires a conductive carbon black layer component. Accordingly, present Claim 1 is believed patentably distinguished over the patent.

Applicants also maintain their position with respect to Kishida et al is the matter of the addition of a lubricant to the conductive layer of the composite of the patent in that it is done so to improve the fluidity of the composition in the co-extrusion molding step of the disclosed process of the reference. On the other hand, in the present invention, the outer layer is provided with a lubricant in the stated amount in order to aid in release of a sheet from the surfaces of a molding apparatus. The stated amount of lubricant of 0.01 to 1 % by weight is effective in achieving the result desired in the present invention as stated previously. Accordingly, applicants submit that the Kishida et al patent does not lead one of skill in the art to incorporate a lubricant into the outer layer of the composite sheet of the invention for the purpose stated.

Applicants remain of the opinion that the Kitazaki et al patent does not show or suggest the claimed layered composite sheet of the invention. As previously well noted on the record, the surface protective film formed of a layer (A) and a layer (B), wherein layer (A) is formed at least of a hydrogenated product of a random copolymer comprising styrene and a diene series hydrocarbon and optionally a polyolefin, and wherein layer (B) is formed of at least a polyolefin and optionally a hydrogenated product of a random copolymer comprising styrene and a diene series hydrocarbon of the Kitazaki et al patent is not in any way suggestive of the present composite sheet that has a substrate layer that is limited to glass-clear polystyrene, impact modified polystyrene, styrene-butadiene block copolymers with 15 to 40 % by wt of butadiene and 85 to 60 % by wt of styrene and mixtures thereof and that has an outer layer formed from the several thermoplastic polymer materials specified in

Claim 1. Accordingly, the composite of the Kitazaki et al patent is structurally different from the present composite sheet.

Another way in which the present composite sheet is distinguished over the surface protective film of Kitazaki et al is on the basis of layer thicknesses as previously stated. Whereas in the present invention the thickness of the substrate layer ranges from 1 to 100 mm and the thickness of the outer layer ranges from 10-500 μm , in the reference, only the thickness of the entire surface protective film is taught as ranging from 1 to 1000 μm . Thus, the differences in thickness dimensions are another way of clearly distinguishing the present invention over the Kitazaki et al patent.

Finally, applicants maintain their comments on the record as to the difficulty in combining the Park et al disclosure that shows a multi-layer, heat-sealable structure which has exceptionally low film to film coefficient of friction and avoids package to package sticking that is formed of a base layer (a), as well as the skin layer (b), each formed from specific polyolefins, while neither Kishida et al nor Kitazaki et al shows or suggests composites that are prepared from polyolefins. Accordingly, the combined references do not suggest the present invention as claimed and withdrawal of the rejection is respectfully requested.

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It is believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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